

FORM PTO-1449

## INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO.  
1744.1330000APPLICATION NO.  
09/986,764APPLICANT  
Rawlins et al.FILING DATE  
November 9, 2001GROUP  
2631

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| Dr.              | AA1 | 2,057,613       | 10/1936 | Gardner           |       |           |             |
|                  | AB1 | 2,241,078       | 05/1941 | Vreeland          |       |           |             |
|                  | AC1 | 2,270,385       | 01/1942 | Skillman          |       |           |             |
|                  | AD1 | 2,283,575       | 05/1942 | Roberts           |       |           |             |
|                  | AE1 | 2,358,152       | 09/1944 | Earp              |       |           |             |
|                  | AF1 | 2,410,350       | 10/1946 | Labin et al.      |       |           |             |
|                  | AG1 | 2,451,430       | 10/1948 | Barone            |       |           |             |
|                  | AH1 | 2,462,069       | 02/1949 | Chatterjea et al. |       |           |             |
| Dr.              | AI1 | 2,462,181       | 02/1949 | Grosselfinger     |       |           |             |

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|     | AP | 1 | Al-Ahmad, H.A.M. et al., "Doppler Frequency Correction for a Non-Geostationary Communications Satellite. Techniques for CERS and T-SAT," <i>Electronics Division Colloquium on Low Noise Oscillators and Synthesizers</i> , IEE, pp. 4/1-4/5 (January 23, 1986). |
|     | AQ | 1 | Ali, I. et al., "Doppler Characterization for LEO Satellites," <i>IEEE Transactions on Communications</i> , IEEE, Vol. 46, No. 3, pp. 309-313 (March 1998).  |
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|                  | AB2 | 2,497,859       | 02/1950 | Boughtwood et al. |                        |                         |             |
|                  | AC2 | 2,499,279       | 02/1950 | Peterson          |                        |                         |             |
|                  | AD2 | 2,802,208       | 08/1957 | Hobbs             |                        |                         |             |
|                  | AE2 | 2,985,875       | 05/1961 | Grisdale et al.   |                        |                         |             |
|                  | AF2 | 3,023,309       | 02/1962 | Foulkes           |                        |                         |             |
|                  | AG2 | 3,069,679       | 12/1962 | Sweeney et al.    |                        |                         |             |
|                  | AH2 | 3,104,393       | 09/1963 | Vogelman          |                        |                         |             |
| Dr.              | AI2 | 3,114,106       | 12/1963 | McManus           |                        |                         |             |

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|                  | AK2 | EP 0 411 840 A2 | 02/1991 | EP      | G01R  | 33/36     | N/A         |
|                  | AL2 | EP 0 411 840 A3 | 07/1991 | EP      | G01R  | 33/36     | N/A         |
| Dr.              | AM2 | EP 0 411 840 B1 | 10/1995 | EP      | G01R  | 33/36     | N/A         |

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|     | AO | 2 | Allstot, D.J. and Black Jr. W.C., "Technological Design Considerations for Monolithic MOS Switched-Capacitor Filtering Systems," <i>Proceedings of the IEEE</i> , IEEE, Vol. 71, No. 8, pp. 967-986 (August 1983).  |
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|     | AQ | 2 | Andreyev, G.A. and Ogarev, S.A., "Phase Distortions of Keyed Millimeter-Wave Signals in the Case of Propagation in a Turbulent Atmosphere," <i>Telecommunications and Radio Engineering</i> , Scripta Technica, Vol. 43, No. 12, pp. 87-90 (December 1988). |
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| Dr.              | AA3 | 3,118,117       | 01/1964 | King et al. |       |           |             |
|                  | AB3 | 3,226,643       | 12/1965 | McNair      |       |           |             |
|                  | AC3 | 3,258,694       | 06/1966 | Shepherd    |       |           |             |
|                  | AD3 | 3,383,598       | 05/1968 | Sanders     |       |           |             |
|                  | AE3 | 3,384,822       | 05/1968 | Miyagi      |       |           |             |
|                  | AF3 | 3,454,718       | 07/1969 | Perreault   |       |           |             |
|                  | AG3 | 3,523,291       | 08/1970 | Pierret     |       |           |             |
|                  | AH3 | 3,548,342       | 12/1970 | Maxey       |       |           |             |
| Dr.              | AI3 | 3,555,428       | 01/1971 | Perreault   |       |           |             |

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|                  | AK3 | EP 0 423 718 A3 | 08/1992 | EP      | H04N  | 7/01      | N/A         |
|                  | AL3 | EP 0 486 095 A1 | 05/1992 | EP      | H03D  | 3/00      | N/A         |
| Dr.              | AM3 | EP 0 486 095 B1 | 02/1997 | EP      | H03D  | 3/00      | N/A         |

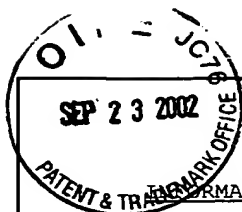
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|     | AQ | 3 | Baines, R., "The DSP Bottleneck," <i>IEEE Communications Magazine</i> , IEEE Communications Society, pp. 46-54 (May 1995).  |
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|                     | AB4 | 3,621,402          | 11/1971 | Gardner       |       |               |             |
|                     | AC4 | 3,623,160          | 11/1971 | Giles et al.  |       |               |             |
|                     | AD4 | 3,626,417          | 12/1971 | Gilbert       |       |               |             |
|                     | AE4 | 3,629,696          | 12/1971 | Bartelink     |       |               |             |
|                     | AF4 | 3,662,268          | 05/1972 | Gans et al.   |       |               |             |
|                     | AG4 | 3,689,841          | 09/1972 | Bello et al.  |       |               |             |
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| Dr.                 | AI4 | 3,717,844          | 02/1973 | Barret et al. |       |               |             |

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|                     | AK4 | EP 0 512 748 A3 | 07/1993 | EP      | H04N  | 9/64          | N/A         |
|                     | AL4 | EP 0 512 748 B1 | 11/1998 | EP      | H04N  | 9/64          | N/A         |
| Dr.                 | AM4 | EP 0 548 542 A1 | 06/1993 | EP      | H03B  | 19/14         | N/A         |

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|                  | AB5 | 3,806,811       | 04/1974 | Thompson        |                        |                         |             |
|                  | AC5 | 3,868,601       | 02/1975 | MacAfee         |                        |                         |             |
|                  | AD5 | 3,949,300       | 04/1976 | Sadler          |                        |                         |             |
|                  | AE5 | 3,967,202       | 06/1976 | Batz            |                        |                         |             |
|                  | AF5 | 3,980,945       | 09/1976 | Bickford        |                        |                         |             |
|                  | AG5 | 3,987,280       | 10/1976 | Bauer           |                        |                         |             |
|                  | AH5 | 3,991,277       | 11/1976 | Hirata          |                        |                         |             |
| Dr.              | AI5 | 4,003,002       | 01/1977 | Snijders et al. |                        |                         |             |

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|                  | AK5 | EP 0 632 288 A3 | 07/1996 | EP      | G01S  | 13/75     | N/A         |
|                  | AL5 | EP 0 696 854 A1 | 02/1996 | EP      | H04B  | 1/26      | N/A         |
| Dr.              | AM5 | EP 0 782 275 A2 | 07/1997 | EP      | H04B  | 7/02      | N/A         |

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| Dr. | AR | 5 | Burgueño, A. et al., "Spectral Analysis of 49 Years of Rainfall Rate and Relation to Fade Dynamics," <i>IEEE Transactions on Communications</i> , IEEE Communications Society, Vol. 38, No. 9, pp. 1359-1366 (September 1990).  |

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| Dr.              | AA6 | 4,013,966       | 03/1977 | Campbell          |       |           |             |
|                  | AB6 | 4,019,140       | 04/1977 | Swordlow          |       |           |             |
|                  | AC6 | 4,035,732       | 07/1977 | Lohrmann          |       |           |             |
|                  | AD6 | 4,047,121       | 09/1977 | Campbell          |       |           |             |
|                  | AE6 | 4,066,841       | 01/1978 | Young             |       |           |             |
|                  | AF6 | 4,066,919       | 01/1978 | Huntington        |       |           |             |
|                  | AG6 | 4,081,748       | 03/1978 | Batz              |       |           |             |
|                  | AH6 | 4,130,765       | 12/1978 | Arakelian et al.  |       |           |             |
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|                  | AL6 | EP 0 837 565 A1 | 04/1998 | EP      | H04B  | 1/69      | N/A         |
| Dr.              | AM6 | EP 0 862 274 A1 | 09/1998 | EP      | H03M  | 1/06      | N/A         |

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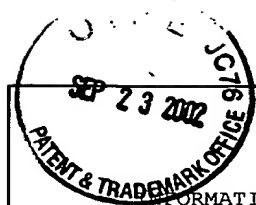
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|     | AO | 6 | Chan, P. et al., "A Highly Linear 1-GHz CMOS Downconversion Mixer," <i>European Solid State Circuits Conference</i> , IEEE Communication Society, pp. 210-213 (September 22-24, 1993). |
|     | AP | 6 | Copy of Declaration of Michael J. Bultman filed in patent application Ser. No. 09/176,022, which is directed to related subject matter, 2 pages.                                       |
|     | AQ | 6 | Copy of Declaration of Robert W. Cook filed in patent application Ser. No. 09/176,022, which is directed to related subject matter, 2 pages.   |
| Dr. | AR | 6 | Copy of Declaration of Alex Holtz filed in patent application Ser. No. 09/176,022, which is directed to related subject matter, 3 pages.   |

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|                  | AB7 | 4,170,764       | 10/1979 | Salz et al.   |                        |                         |             |
|                  | AC7 | 4,204,171       | 05/1980 | Sutphin, Jr.  |                        |                         |             |
|                  | AD7 | 4,210,872       | 07/1980 | Gregorian     |                        |                         |             |
|                  | AE7 | 4,245,355       | 01/1981 | Pascoe et al. |                        |                         |             |
|                  | AF7 | 4,253,066       | 02/1981 | Fisher et al. |                        |                         |             |
|                  | AG7 | 4,253,069       | 02/1981 | Nossek        |                        |                         |             |
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|                  | AK7 | FR 2 743 231 A1 | 07/1997 | FR      | H04B  | 7/12      | No          |
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|-----|----|---|---|
| Dr. | AN | 1 | Copy of Declaration of Richard C. Looke filed in patent application Ser. No. 09/176,022, which is directed to related subject matter, 2 pages.  |
|     | AO | 1 | Copy of Declaration of Charley D. Moses, Jr. filed in patent application Ser. No. 09/176,022, which is directed to related subject matter, 2 pages.   |
|     | AP | 1 | Copy of Declaration of Jeffrey L. Parker and David F. Sorrells, with attachment Exhibit 1, filed in patent application Ser. No. 09/176,022, which is directed to related subject matter, 130 pages. |
|     | AQ | 1 | Dewey, R.J. and Collier, C.J., "Multi-Mode Radio Receiver," <i>Electronics Division Colloquium on Digitally Implemented Radios</i> , IEE, pp. 3/1-3/5 (October 18, 1985).                           |
| Dr. | AR | 1 | DIALOG File 347 (JAPIO) English Language Patent Abstract for JP 2-276351, 1 page (November 13, 1990 - Date of publication of application).  |

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09/986,764APPLICANT  
Rawlins et al.FILING DATE  
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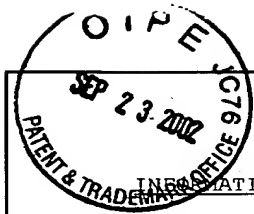
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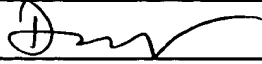
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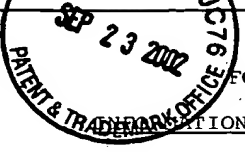
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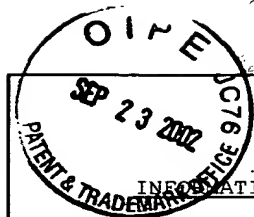
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November 9, 2001GROUP  
2631

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|                  | AB15 | 4,871,987       | 10/1989 | Kawase                     |       |           |             |
|                  | AC15 | 4,885,587       | 12/1989 | Wiegand <i>et al.</i>      |       |           |             |
|                  | AD15 | 4,885,756       | 12/1989 | Fontanes <i>et al.</i>     |       |           |             |
|                  | AE15 | 4,888,557       | 12/1989 | Puckette, IV <i>et al.</i> |       |           |             |
|                  | AF15 | 4,890,302       | 12/1989 | Muiliwijk                  |       |           |             |
|                  | AG15 | 4,893,316       | 01/1990 | Janc <i>et al.</i>         |       |           |             |
|                  | AH15 | 4,893,341       | 01/1990 | Gehring                    |       |           |             |
| Dr.              | AI15 | 4,894,766       | 01/1990 | De Agro                    |       |           |             |

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| Dr.              | AJ15 | JP 6-237276     | 08/1994 | JP      | H04L  | 27/20     | No                     |
|                  | AK15 | JP 8-23359      | 01/1996 | JP      | H04L  | 27/20     | No                     |
|                  | AL15 | JP 47-2314      | 02/1972 | JP      | ---   | ---       | Yes<br>(Doc. AP53)     |
| Dr.              | AM15 | JP 58-7903      | 01/1983 | JP      | H03C  | 1/02      | Partial<br>(Doc. AQ53) |

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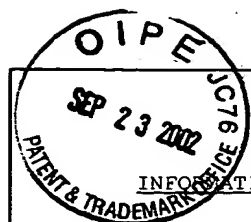
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|     | AQ | 15 | Lam, W.K. <i>et al.</i> , "Wideband sounding of 11.6 Ghz transhorizon channel," <i>Electronics Letters</i> , IEE, Vol. 30, No. 9, pp. 738-739 (April 28, 1994).   |
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FORM PTO-1449

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ATTY. DOCKET NO.  
1744.1330000APPLICATION NO.  
09/986,764APPLICANT  
Rawlins et al.FILING DATE  
November 9, 2001GROUP  
2631

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|                     | AB16 | 4,902,979          | 02/1990 | Puckette, IV       |       |               |             |
|                     | AC16 | 4,908,579          | 03/1990 | Tawfik et al.      |       |               |             |
|                     | AD16 | 4,910,752          | 03/1990 | Yester, Jr. et al. |       |               |             |
|                     | AE16 | 4,914,405          | 04/1990 | Wells              |       |               |             |
|                     | AF16 | 4,920,510          | 04/1990 | Senderowicz et al. |       |               |             |
|                     | AG16 | 4,922,452          | 05/1990 | Larsen et al.      |       |               |             |
|                     | AH16 | 4,931,921          | 06/1990 | Anderson           |       |               |             |
| Dr.                 | AI16 | 4,944,025          | 07/1990 | Gehring et al.     |       |               |             |

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|                     | AK16 | JP 60-58705     | 04/1985 | JP      | H03D  | 7/00          | No          |
|                     | AL16 | JP 4-123614     | 04/1992 | JP      | H03K  | 19/0175       | No          |
| Dr.                 | AM16 | JP 4-127601     | 04/1992 | JP      | H03D  | 7/00          | No          |

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|     | AQ | 16 | Liechti, C.A., "Performance of Dual-gate GaAs MESFET's as Gain-Controlled Low-Noise Amplifiers and High-Speed Modulators," <i>IEEE Transactions on Microwave Theory and Techniques</i> , IEEE Microwave Theory and Techniques Society, Vol. MTT-23, No. 6, pp. 461-469 (June 1975). |
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|   | APPLICANT<br>Rawlins et al.      |                               |
|   | FILING DATE<br>November 9, 2001  | GROUP<br>2631                 |

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|                  | AC17 | 4,967,160       | 10/1990 | Quievy et al.     |       |           |             |
|                  | AD17 | 4,970,703       | 11/1990 | Hariharan et al.  |       |           |             |
|                  | AE17 | 4,982,353       | 01/1991 | Jacob et al.      |       |           |             |
|                  | AF17 | 4,984,077       | 01/1991 | Uchida            |       |           |             |
|                  | AG17 | 4,995,055       | 02/1991 | Weinberger et al. |       |           |             |
|                  | AH17 | 5,003,621       | 03/1991 | Gailus            |       |           |             |
| Dr.              | AI17 | 5,005,169       | 04/1991 | Bronder et al.    |       |           |             |

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|                  | AL17 | JP 7-154344     | 06/1995 | JP      | H04B  | 14/06     | No          |
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1744.1330000APPLICATION NO.  
09/986,764APPLICANT  
Rawlins *et al.*FILING DATE  
November 9, 2001GROUP  
2631

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|                  | AB18 | 5,010,585       | 04/1991 | Garcia                   |       |           |             |
|                  | AC18 | 5,014,304       | 05/1991 | Nicollini <i>et al.</i>  |       |           |             |
|                  | AD18 | 5,015,963       | 05/1991 | Sutton                   |       |           |             |
|                  | AE18 | 5,017,924       | 05/1991 | Guiberteau <i>et al.</i> |       |           |             |
|                  | AF18 | 5,020,149       | 05/1991 | Hemmie                   |       |           |             |
|                  | AG18 | 5,020,154       | 05/1991 | Zierhut                  |       |           |             |
|                  | AH18 | 5,052,050       | 09/1991 | Collier <i>et al.</i>    |       |           |             |
| Dr.              | AI18 | 5,065,409       | 11/1991 | Hughes <i>et al.</i>     |       |           |             |

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FORM PTO-1449

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1744.1330000APPLICATION NO.  
09/986,764APPLICANT  
Rawlins et al.FILING DATE  
November 9, 2001GROUP  
2631

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|                     | AB19 | 5,091,921          | 02/1992 | Minami       |       |               |             |
|                     | AC19 | 5,095,533          | 03/1992 | Loper et al. |       |               |             |
|                     | AD19 | 5,095,536          | 03/1992 | Loper        |       |               |             |
|                     | AE19 | 5,111,152          | 05/1992 | Makino       |       |               |             |
|                     | AF19 | 5,113,094          | 05/1992 | Grace et al. |       |               |             |
|                     | AG19 | 5,113,129          | 05/1992 | Hughes       |       |               |             |
|                     | AH19 | 5,122,765          | 06/1992 | Pataut       |       |               |             |
| Dr.                 | AI19 | 5,124,592          | 06/1992 | Hagino       |       |               |             |

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|                     | AK19 | WO 97/08839 A2&A3 | 03/1997 | PCT     | H04B  | 1/04          | N/A         |
|                     | AL19 | EP 0 254 844 A2   | 02/1988 | EP      | H03D  | 7/00          | N/A         |
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FORM PTO-1449

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09/986,764APPLICANT  
Rawlins et al.FILING DATE  
November 9, 2001GROUP  
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|                     | AB20 | 5,140,705          | 08/1992 | Kosuga          |       |               |             |
|                     | AC20 | 5,150,124          | 09/1992 | Moore et al.    |       |               |             |
|                     | AD20 | 5,151,661          | 09/1992 | Caldwell et al. |       |               |             |
|                     | AE20 | 5,159,710          | 10/1992 | Cusdin          |       |               |             |
|                     | AF20 | 5,170,414          | 12/1992 | Silvian         |       |               |             |
|                     | AG20 | 5,172,070          | 12/1992 | Hiraiwa et al.  |       |               |             |
|                     | AH20 | 5,191,459          | 03/1993 | Thompson et al. |       |               |             |
| Dr.                 | AI20 | 5,204,642          | 04/1993 | Ashgar et al.   |       |               |             |

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| Dr.                 | AJ20 | JP 60-130203    | 07/1985 | JP      | H03D  | 7/00          | Yes<br>(Doc. AO56) |
|                     | AK20 |                 |         |         |       |               | Yes<br>No          |
|                     | AL20 |                 |         |         |       |               | Yes<br>No          |
|                     | AM20 |                 |         |         |       |               | Yes<br>No          |

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|   | APPLICANT<br>Rawlins et al.      |                               |
|   | FILING DATE<br>November 9, 2001  | GROUP<br>2631                 |

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|                  | AB21 | 5,214,787       | 05/1993 | Karkota, Jr.  |                        |                         |             |
|                  | AC21 | 5,220,583       | 06/1993 | Solomon       |                        |                         |             |
|                  | AD21 | 5,220,680       | 06/1993 | Lee           |                        |                         |             |
|                  | AE21 | 5,222,144       | 06/1993 | Whikehart     |                        |                         |             |
|                  | AF21 | 5,230,097       | 07/1993 | Currie et al. |                        |                         |             |
|                  | AG21 | 5,239,686       | 08/1993 | Downey        |                        |                         |             |
|                  | AH21 | 5,241,561       | 08/1993 | Barnard       |                        |                         |             |
| Dr.              | AI21 | 5,249,203       | 09/1993 | Loper         |                        |                         |             |

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| Dr.              | AJ21 |                 |      |         |       |           | Yes<br>No   |
|                  | AK21 |                 |      |         |       |           | Yes<br>No   |
|                  | AL21 |                 |      |         |       |           | Yes<br>No   |
|                  | AM21 |                 |      |         |       |           | Yes<br>No   |

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|   | FILING DATE<br>November 9, 2001  | GROUP<br>2631                 |

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| EXAMINER INITIAL |      | DOCUMENT NUMBER | DATE    | NAME          | CLASS | FILING DATE |
|------------------|------|-----------------|---------|---------------|-------|-------------|
| Dr.              | AA22 | 5,251,218       | 10/1993 | Stone et al.  |       |             |
|                  | AB22 | 5,251,232       | 10/1993 | Nonami        |       |             |
|                  | AC22 | 5,260,970       | 11/1993 | Henry et al.  |       |             |
|                  | AD22 | 5,263,194       | 11/1993 | Ragan         |       |             |
|                  | AE22 | 5,263,196       | 11/1993 | Jasper        |       |             |
|                  | AF22 | 5,267,023       | 11/1993 | Kawasaki      |       |             |
|                  | AG22 | 5,278,826       | 01/1994 | Murphy et al. |       |             |
|                  | AH22 | 5,282,023       | 01/1994 | Scarpa        |       |             |
| Dr.              | AI22 | 5,287,516       | 02/1994 | Schaub        |       |             |

## FOREIGN PATENT DOCUMENTS

| EXAMINER INITIAL |      | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-CLASS | TRANSLATION |
|------------------|------|-----------------|------|---------|-------|-----------|-------------|
|                  | AJ22 |                 |      |         |       |           | Yes<br>No   |
|                  | AK22 |                 |      |         |       |           | Yes<br>No   |
|                  | AL22 |                 |      |         |       |           | Yes<br>No   |
|                  | AM22 |                 |      |         |       |           | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

|     |    |    |   |
|-----|----|----|---|
| Dr. | AN | 22 | Press Release, "Parkervision, Inc. Announces the Appointment of Michael Baker to the New Position of National Sales Manager," Lippert/Heilshorn and Associates, 1 Page (April 7, 1994). |
|     | AO | 22 | Press Release, "Parkervision's Cameraman Well-Received By Distance Learning Market," Lippert/Heilshorn and Associates, 2 Pages (April 8, 1994).   |
|     | AP | 22 | Press Release, "Parkervision, Inc. Announces First Quarter Financial Results," Lippert/Heilshorn and Associates, 2 Pages (April 26, 1994).  |
|     | AQ | 22 | Press Release, "Parkervision, Inc. Announces The Retirement of William H. Fletcher, Chief Financial Officer," Lippert/Heilshorn and Associates, 1 Page (May 11, 1994).                  |
| Dr. | AR | 22 | Press Release, "Parkervision, Inc. Announces New Cameraman System II™ At Infocomm Trade Show," Lippert/Heilshorn and Associates, 3 Pages (June 9, 1994).                                |


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|---|----------------------------------|-------------------------------|
|  FORM PTO-1449<br>INFORMATION DISCLOSURE STATEMENT | ATTY. DOCKET NO.<br>1744.1330000 | APPLICATION NO.<br>09/986,764 |
|   | APPLICANT<br>Rawlins et al.      |                               |
|   | FILING DATE<br>November 9, 2001  | GROUP<br>2631                 |

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|------------------|------|-----------------|---------|----------------|-------|-----------|-------------|
| Dr.              | AA23 | 5,293,398       | 03/1994 | Hamao et al.   |       |           |             |
|                  | AB23 | 5,303,417       | 04/1994 | Laws           |       |           |             |
|                  | AC23 | 5,307,517       | 04/1994 | Rich           |       |           |             |
|                  | AD23 | 5,315,583       | 05/1994 | Murphy et al.  |       |           |             |
|                  | AE23 | 5,321,852       | 06/1994 | Seong          |       |           |             |
|                  | AF23 | 5,325,204       | 06/1994 | Scarpa         |       |           |             |
|                  | AG23 | 5,337,014       | 08/1994 | Najle et al.   |       |           |             |
|                  | AH23 | 5,339,054       | 08/1994 | Taguchi        |       |           |             |
| Dr.              | AI23 | 5,339,459       | 08/1994 | Schiltz et al. |       |           |             |

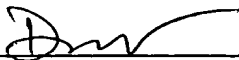
## FOREIGN PATENT DOCUMENTS

| EXAMINER INITIAL |      | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-CLASS | TRANSLATION |
|------------------|------|-----------------|------|---------|-------|-----------|-------------|
|                  | AJ23 |                 |      |         |       |           | Yes<br>No   |
|                  | AK23 |                 |      |         |       |           | Yes<br>No   |
|                  | AL23 |                 |      |         |       |           | Yes<br>No   |
|                  | AM23 |                 |      |         |       |           | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

|     |    |    |  |
|-----|----|----|--|
| Dr. | AN | 23 | Press Release, "Parkervision, Inc. Announces Appointments to its National Sales Force," Lippert/Heilshorn and Associates, 2 Pages (June 17, 1994).                           |
|     | AO | 23 | Press Release, "Parkervision, Inc. Announces Second Quarter and Six Months Financial Results," Lippert/Heilshorn and Associates, 3 Pages (August 9, 1994).                   |
|     | AP | 23 | Press Release, "Parkervision, Inc. Announces Third Quarter and Nine Months Financial Results," Lippert/Heilshorn and Associates, 3 Pages (October 28, 1994).                 |
|     | AQ | 23 | Press Release, "Parkervision, Inc. Announces First Significant Dealer Sale of Its <i>Camerman@</i> System II," Lippert/Heilshorn and Associates, 2 Pages (November 7, 1994). |
| Dr. | AR | 23 | Press Release, "Parkervision, Inc. Announces Fourth Quarter and Year End Results," Lippert/Heilshorn and Associates, 2 Pages (March 1, 1995).                                |

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FORM PTO-1449

## INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO.  
1744.1330000APPLICATION NO.  
09/986,764APPLICANT  
Rawlins *et al.*FILING DATE  
November 9, 2001GROUP  
2631

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## U.S. PATENT DOCUMENTS

| EXAMINER<br>INITIAL |      | DOCUMENT<br>NUMBER | DATE    | NAME                    | CLASS | SUB-<br>CLASS | FILING DATE |
|---------------------|------|--------------------|---------|-------------------------|-------|---------------|-------------|
| Dr.                 | AA24 | 5,355,114          | 10/1994 | Sutterlin <i>et al.</i> |       |               |             |
|                     | AB24 | 5,361,408          | 11/1994 | Watanabe <i>et al.</i>  |       |               |             |
|                     | AC24 | 5,369,800          | 11/1994 | Takagi <i>et al.</i>    |       |               |             |
|                     | AD24 | 5,375,146          | 12/1994 | Chalmers                |       |               |             |
|                     | AE24 | 5,379,040          | 01/1995 | Mizomoto <i>et al.</i>  |       |               |             |
|                     | AF24 | 5,379,141          | 01/1995 | Thompson <i>et al.</i>  |       |               |             |
|                     | AG24 | 5,388,063          | 02/1995 | Takatori <i>et al.</i>  |       |               |             |
|                     | AH24 | 5,390,364          | 02/1995 | Webster <i>et al.</i>   |       |               |             |
| Dr.                 | AI24 | 5,400,084          | 03/1995 | Scarpa                  |       |               |             |

## FOREIGN PATENT DOCUMENTS

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|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ24 |                 |      |         |       |               | Yes<br>No   |
|                     | AK24 |                 |      |         |       |               | Yes<br>No   |
|                     | AL24 |                 |      |         |       |               | Yes<br>No   |
|                     | AM24 |                 |      |         |       |               | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

|     |    |           |   |
|-----|----|-----------|---|
| Dr. | AN | <u>24</u> | Press Release, "Parkervision, Inc. Announces Joint Product Developments With VTEL," Lippert/Heilshorn and Associates, 2 Pages (March 21, 1995).             |
|     | AO | <u>24</u> | Press Release, "Parkervision, Inc. Announces First Quarter Financial Results," Lippert/Heilshorn and Associates, 3 Pages (April 28, 1995).                  |
|     | AP | <u>24</u> | Press Release, "Parkervision Wins Top 100 Product Districts' Choice Award," Parkervision Marketing and Manufacturing Headquarters, 1 Page (June 29, 1995).  |
|     | AQ | <u>24</u> | Press Release, "Parkervision National Sales Manager Next President of USDLA," Parkervision Marketing and Manufacturing Headquarters, 1 Page (July 6, 1995). |
| Dr. | AR | <u>24</u> | Press Release, "Parkervision Granted New Patent," Parkervision Marketing and Manufacturing Headquarters, 1 Page (July 21, 1995).                            |


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|   | APPLICANT<br>Rawlins et al.      |                               |
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|------------------|------|-----------------|---------|---------------|-------|-----------|-------------|
| Dr.              | AA25 | 5,404,127       | 04/1995 | Lee et al.    |       |           |             |
|                  | AB25 | 5,410,541       | 04/1995 | Hotto         |       |           |             |
|                  | AC25 | 5,410,743       | 04/1995 | Seely et al.  |       |           |             |
|                  | AD25 | 5,412,352       | 05/1995 | Graham        |       |           |             |
|                  | AE25 | 5,416,803       | 05/1995 | Janer         |       |           |             |
|                  | AF25 | 5,422,913       | 06/1995 | Wilkinson     |       |           |             |
|                  | AG25 | 5,423,082       | 06/1995 | Cygan et al.  |       |           |             |
|                  | AH25 | 5,428,638       | 06/1995 | Cioffi et al. |       |           |             |
| Dr.              | AI25 | 5,428,640       | 06/1995 | Townley       |       |           |             |

## FOREIGN PATENT DOCUMENTS

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|------------------|------|-----------------|------|---------|-------|-----------|-------------|
|                  | AJ25 |                 |      |         |       |           | Yes<br>No   |
|                  | AK25 |                 |      |         |       |           | Yes<br>No   |
|                  | AL25 |                 |      |         |       |           | Yes<br>No   |
|                  | AM25 |                 |      |         |       |           | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)


|     |    |    |  |
|-----|----|----|--|
| Dr. | AN | 25 | Press Release, "Parkervision, Inc. Announces Second Quarter and Six Months Financial Results," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (July 31, 1995).       |
|     | AO | 25 | Press Release, "Parkervision, Inc. Expands Its Cameraman System II Product Line," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (September 22, 1995).               |
|     | AP | 25 | Press Release, "Parkervision Announces New Camera Control Technology," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (October 25, 1995).                            |
|     | AQ | 25 | Press Release, "Parkervision, Inc. Announces Completion of VTEL/Parkervision Joint Product Line," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (October 30, 1995). |
| Dr. | AR | 25 | Press Release, "Parkervision, Inc. Announces Third Quarter and Nine Months Financial Results," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (October 30, 1995).    |

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| EXAMINER INITIAL |      | DOCUMENT NUMBER | DATE    | NAME            | CLASS                  | SUB-CLASS               | FILING DATE |
|------------------|------|-----------------|---------|-----------------|------------------------|-------------------------|-------------|
| Dr.              | AA26 | 5,434,546       | 07/1995 | Palmer          | Technology Center 2600 | SEP 24 2002<br>RECEIVED |             |
|                  | AB26 | 5,438,692       | 08/1995 | Mohindra        |                        |                         |             |
|                  | AC26 | 5,444,415       | 08/1995 | Dent et al.     |                        |                         |             |
|                  | AD26 | 5,444,416       | 08/1995 | Ishikawa et al. |                        |                         |             |
|                  | AE26 | 5,444,865       | 08/1995 | Heck et al.     |                        |                         |             |
|                  | AF26 | 5,446,421       | 08/1995 | Kechkaylo       |                        |                         |             |
|                  | AG26 | 5,446,422       | 08/1995 | Mattila et al.  |                        |                         |             |
|                  | AH26 | 5,448,602       | 09/1995 | Ohmori et al.   |                        |                         |             |
| Dr.              | AI26 | 5,451,899       | 09/1995 | Lawton          |                        |                         |             |

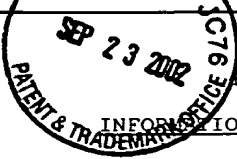
## FOREIGN PATENT DOCUMENTS

| EXAMINER INITIAL |      | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-CLASS | TRANSLATION |
|------------------|------|-----------------|------|---------|-------|-----------|-------------|
|                  | AJ26 |                 |      |         |       |           | Yes<br>No   |
|                  | AK26 |                 |      |         |       |           | Yes<br>No   |
|                  | AL26 |                 |      |         |       |           | Yes<br>No   |
|                  | AM26 |                 |      |         |       |           | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

|     |    |    |  |
|-----|----|----|--|
| Dr. | AN | 26 | Press Release, "Parkervision's Cameraman Personal Locator Camera System Wins Telecon XV Award," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (November 1, 1995). |
|     | AO | 26 | Press Release, "Parkervision, Inc. Announces Purchase Commitment From VTEL Corporation," Parkervision Marketing and Manufacturing Headquarters, 1 Page (February 26, 1996).        |
|     | AP | 26 | Press Release, "ParkerVision, Inc. Announces Fourth Quarter and Year End Results," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (February 27, 1996).             |
|     | AQ | 26 | Press Release, "ParkerVision, Inc. Expands its Product Line," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (March 7, 1996).                                      |
| Dr. | AR | 26 | Press Release, "ParkerVision Files Patents for its Research of Wireless Technology," Parkervision Marketing and Manufacturing Headquarters, 1 Page (March 28, 1996).               |

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| EXAMINER<br>   | DATE CONSIDERED<br>6/4/03 |
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|------------------|------|-----------------|---------|------------------|-------|-----------|-------------|
| Dr.              | AA27 | 5,454,007       | 09/1995 | Dutta            |       |           |             |
|                  | AB27 | 5,454,009       | 09/1995 | Fruit et al.     |       |           |             |
|                  | AC27 | 5,463,356       | 10/1995 | Palmer           |       |           |             |
|                  | AD27 | 5,463,357       | 10/1995 | Hobden           |       |           |             |
|                  | AE27 | 5,465,071       | 11/1995 | Kobayashi et al. |       |           |             |
|                  | AF27 | 5,465,410       | 11/1995 | Hiben et al.     |       |           |             |
|                  | AG27 | 5,465,415       | 11/1995 | Bien             |       |           |             |
|                  | AH27 | 5,471,162       | 11/1995 | McEwan           |       |           |             |
| Dr.              | AI27 | 5,479,120       | 12/1995 | McEwan           |       |           |             |

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| EXAMINER INITIAL |      | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-CLASS | TRANSLATION |
|------------------|------|-----------------|------|---------|-------|-----------|-------------|
|                  | AJ27 |                 |      |         |       |           | Yes<br>No   |
|                  | AK27 |                 |      |         |       |           | Yes<br>No   |
|                  | AL27 |                 |      |         |       |           | Yes<br>No   |
|                  | AM27 |                 |      |         |       |           | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)


|     |    |    |  |
|-----|----|----|--|
| Dr. | AN | 27 | Press Release, "Parkervision, Inc. Announces First Significant Sale of Its Cameraman® Three-Chip System," Parkervision Marketing and Manufacturing Headquarters, 2 pages (April 12, 1996). |
|     | AO | 27 | Press Release, "Parkervision, Inc. Introduces New Product Line For Studio Production Market," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (April 15, 1996).             |
|     | AP | 27 | Press Release, "Parkervision, Inc. Announces Private Placement of 800,000 Shares," Parkervision Marketing and Manufacturing Headquarters, 1 Page (April 15, 1996).                         |
|     | AQ | 27 | Press Release, "Parkervision, Inc. Announces First Quarter Financial Results," Parkervision Marketing and Manufacturing Headquarters, 3 Pages (April 30, 1996).                            |
| Dr. | AR | 27 | Press Release, "ParkerVision's New Studio Product Wins Award," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (June 5, 1996).  |

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|   | FILING DATE<br>November 9, 2001  | GROUP<br>2631                 |

## U.S. PATENT DOCUMENTS

| EXAMINER INITIAL |      | DOCUMENT NUMBER | DATE    | NAME             | CLASS | SUB-CLASS | FILING DATE |
|------------------|------|-----------------|---------|------------------|-------|-----------|-------------|
| Dr.              | AA28 | 5,479,447       | 12/1995 | Chow et al.      |       |           |             |
|                  | AB28 | 5,483,193       | 01/1996 | Kennedy et al.   |       |           |             |
|                  | AC28 | 5,483,549       | 01/1996 | Weinberg et al.  |       |           |             |
|                  | AD28 | 5,483,691       | 01/1996 | Heck et al.      |       |           |             |
|                  | AE28 | 5,490,173       | 02/1996 | Whitehart et al. |       |           |             |
|                  | AF28 | 5,493,581       | 02/1996 | Young et al.     |       |           |             |
|                  | AG28 | 5,493,721       | 02/1996 | Reis             |       |           |             |
|                  | AH28 | 5,495,200       | 02/1996 | Kwan et al.      |       |           |             |
| Dr.              | AI28 | 5,495,202       | 02/1996 | Hsu              |       |           |             |

## FOREIGN PATENT DOCUMENTS

| EXAMINER INITIAL |      | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-CLASS | TRANSLATION |
|------------------|------|-----------------|------|---------|-------|-----------|-------------|
|                  | AJ28 |                 |      |         |       |           | Yes<br>No   |
|                  | AK28 |                 |      |         |       |           | Yes<br>No   |
|                  | AL28 |                 |      |         |       |           | Yes<br>No   |
|                  | AM28 |                 |      |         |       |           | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)


|     |    |    |   |
|-----|----|----|---|
| Dr. | AN | 28 | Press Release, "Parkervision, Inc. Announces Second Quarter and Six Months Financial Results," Parkervision Marketing and Manufacturing Headquarters, 3 Pages (August 1, 1996).   |
|     | AO | 28 | Press Release, "Parkervision, Inc. Announces Third Quarter and Nine Months Financial Results," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (October 29, 1996). |
|     | AP | 28 | Press Release, "PictureTel and ParkerVision Sign Reseller Agreement," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (October 30, 1996).                          |
|     | AQ | 28 | Press Release, "CLI and ParkerVision Bring Enhanced Ease-of-Use to Videoconferencing," CLI/Parkervision, 2 Pages (January 20, 1997).  |
| Dr. | AR | 28 | Press Release, "Parkervision, Inc. Announces Fourth Quarter and Year End Results," Parkervision Marketing and Manufacturing Headquarters, 3 Pages (February 27, 1997).            |

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|   | APPLICANT<br>Rawlins <i>et al.</i> |                               |
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## U.S. PATENT DOCUMENTS

| EXAMINER INITIAL |      | DOCUMENT NUMBER | DATE    | NAME                     | CLASS | SUB-CLASS | FILING DATE |
|------------------|------|-----------------|---------|--------------------------|-------|-----------|-------------|
| Dr.              | AA29 | 5,495,500       | 02/1996 | Jovanovich <i>et al.</i> |       |           |             |
|                  | AB29 | 5,499,267       | 03/1996 | Ohe <i>et al.</i>        |       |           |             |
|                  | AC29 | 5,500,758       | 03/1996 | Thompson <i>et al.</i>   |       |           |             |
|                  | AD29 | 5,517,688       | 05/1996 | Fajen <i>et al.</i>      |       |           |             |
|                  | AE29 | 5,519,890       | 05/1996 | Pinckley                 |       |           |             |
|                  | AF29 | 5,523,719       | 06/1996 | Longo <i>et al.</i>      |       |           |             |
|                  | AG29 | 5,523,726       | 06/1996 | Kroeger <i>et al.</i>    |       |           |             |
|                  | AH29 | 5,523,760       | 06/1996 | McEwan                   |       |           |             |
|                  | AI29 | 5,539,770       | 07/1996 | Ishigaki                 |       |           |             |
|                  |      |                 |         |                          |       |           |             |

## FOREIGN PATENT DOCUMENTS

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|------------------|------|-----------------|------|---------|-------|-----------|-------------|
|                  | AJ29 |                 |      |         |       |           | Yes<br>No   |
|                  | AK29 |                 |      |         |       |           | Yes<br>No   |
|                  | AL29 |                 |      |         |       |           | Yes<br>No   |
|                  | AM29 |                 |      |         |       |           | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

|     |    |    |   |
|-----|----|----|---|
| Dr. | AN | 29 | Press Release, "Parkervision, Inc. Announces First Quarter Financial Results," Parkervision Marketing and Manufacturing Headquarters, 3 Pages (April 29, 1997).                           |
|     | AO | 29 | Press Release, "NEC and Parkervision Make Distance Learning Closer," NEC America, 2 Pages (June 18, 1997).  |
|     | AP | 29 | Press Release, "Parkervision Supplies JPL with Robotic Cameras, Cameraman Shot Director for Mars Mission," Parkervision Marketing and Manufacturing Headquarters, 2 pages (July 8, 1997). |
|     | AQ | 29 | Press Release, "ParkerVision and IBM Join Forces to Create Wireless Computer Peripherals," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (July 23, 1997).                |
| Dr. | AR | 29 | Press Release, "ParkerVision, Inc. Announces Second Quarter and Six Months Financial Results," Parkervision Marketing and Manufacturing Headquarters, 3 Pages (July 31, 1997).            |

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November 9, 2001GROUP  
2631

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| Dr.                 | AA30 | 5,555,453          | 09/1996 | Kajimoto et al.  |       |               |             |
|                     | AB30 | 5,557,641          | 09/1996 | Weinberg         |       |               |             |
|                     | AC30 | 5,557,642          | 09/1996 | Williams         |       |               |             |
|                     | AD30 | 5,579,341          | 11/1996 | Smith et al.     |       |               |             |
|                     | AE30 | 5,579,347          | 11/1996 | Lindquist et al. |       |               |             |
|                     | AF30 | 5,584,068          | 12/1996 | Mohindra         |       |               |             |
|                     | AG30 | 5,592,131          | 01/1997 | Labreche et al.  |       |               |             |
|                     | AH30 | 5,602,847          | 02/1997 | Pagano et al.    |       |               |             |
| Dr.                 | AI30 | 5,602,868          | 02/1997 | Wilson           |       |               |             |

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|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ30 |                 |      |         |       |               | Yes<br>No   |
|                     | AK30 |                 |      |         |       |               | Yes<br>No   |
|                     | AL30 |                 |      |         |       |               | Yes<br>No   |
|                     | AM30 |                 |      |         |       |               | Yes<br>No   |

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|-----|----|----|--|
| Dr. | AN | 30 | Press Release, "Parkervision, Inc. Announces Private Placement of 990,000 Shares," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (September 8, 1997).   |
|     | AO | 30 | Press Release, "Wal-Mart Chooses Parkervision for Broadcast Production," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (October 24, 1997).  |
|     | AP | 30 | Press Release, "Parkervision, Inc. Announces Third Quarter Financial Results," Parkervision Marketing and Manufacturing Headquarters, 3 Pages (October 30, 1997).  |
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FORM PTO-1449

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ATTY. DOCKET NO.  
1744.1330000APPLICATION NO.  
09/986,764APPLICANT  
Rawlins et al.FILING DATE  
November 9, 2001GROUP  
26

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| Dr.                 | AA31 | 5,604,732          | 02/1997 | Kim et al.    |       |               |             |
|                     | AB31 | 5,608,531          | 03/1997 | Honda et al.  |       |               |             |
|                     | AC31 | 5,610,946          | 03/1997 | Tanaka et al. |       |               |             |
|                     | AD31 | RE 35,494          | 04/1997 | Nicollini     |       |               |             |
|                     | AE31 | 5,617,451          | 04/1997 | Mimura et al. |       |               |             |
|                     | AF31 | 5,619,538          | 04/1997 | Sempel et al. |       |               |             |
|                     | AG31 | 5,621,455          | 04/1997 | Rogers et al. |       |               |             |
|                     | AH31 | 5,630,227          | 05/1997 | Bella et al.  |       |               |             |
| Dr.                 | AI31 | 5,640,415          | 06/1997 | Pandula       |       |               |             |

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|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ31 |                 |      |         |       |               | Yes<br>No   |
|                     | AK31 |                 |      |         |       |               | Yes<br>No   |
|                     | AL31 |                 |      |         |       |               | Yes<br>No   |
|                     | AM31 |                 |      |         |       |               | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

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|-----|----|----|---|
| Dr. | AN | 31 | Press Release, "Parkervision Announces Existing Agreement with IBM Terminates-- Company Continues with Strategic Focus Announced in December," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (January 27, 1998). |
|     | AO | 31 | Press Release, "Laboratory Tests Verify Parkervision Wireless Technology," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (March 3, 1998).  |
|     | AP | 31 | Press Release, "Parkervision, Inc. Announces Fourth Quarter and Year End Financial Results," Parkervision Marketing and Manufacturing Headquarters, 3 Pages (March 5, 1998).  |
|     | AQ | 31 | Press Release, "Parkervision Awarded Editors' Pick of Show for NAB 98," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (April 15, 1998).  |
| Dr. | AR | 31 | Press Release, "Parkervision Announces First Quarter Financial Results," Parkervision Marketing and Manufacturing Headquarters, 3 Pages (May 4, 1998).  |

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FORM PTO-1449

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ATTY. DOCKET NO.  
1744.1330000APPLICATION NO.  
09/986,764APPLICANT  
Rawlins *et al.*FILING DATE  
November 9, 2001GROUP  
631

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| Dr.                 | AA32 | 5,640,424          | 06/1997 | Banavong <i>et al.</i> |       |               |             |
|                     | AB32 | 5,640,428          | 06/1997 | Abe <i>et al.</i>      |       |               |             |
|                     | AC32 | 5,640,698          | 06/1997 | Shen <i>et al.</i>     |       |               |             |
|                     | AD32 | 5,648,985          | 07/1997 | Bjerede <i>et al.</i>  |       |               |             |
|                     | AE32 | 5,650,785          | 07/1997 | Rodal                  |       |               |             |
|                     | AF32 | 5,661,424          | 08/1997 | Tang                   |       |               |             |
|                     | AG32 | 5,663,878          | 09/1997 | Walker                 |       |               |             |
|                     | AH32 | 5,663,986          | 09/1997 | Striffler              |       |               |             |
| Dr.                 | AI32 | 5,668,836          | 09/1997 | Smith <i>et al.</i>    |       |               |             |

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|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ32 |                 |      |         |       |               | Yes<br>No   |
|                     | AK32 |                 |      |         |       |               | Yes<br>No   |
|                     | AL32 |                 |      |         |       |               | Yes<br>No   |
|                     | AM32 |                 |      |         |       |               | Yes<br>No   |

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| Dr. | AN | 32 | Press Release, "Parkervision 'DIRECT2DATA' Introduced in Response to Market Demand," Parkervision Marketing and Manufacturing Headquarters, 3 Pages (July 9, 1998).          |
|     | AO | 32 | Press Release, "Parkervision Expands Senior Management Team," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (July 29, 1998).                                |
|     | AP | 32 | Press Release, "Parkervision Announces Second Quarter and Six Month Financial Results," Parkervision Marketing and Manufacturing Headquarters, 4 Pages (July 30, 1998).      |
|     | AQ | 32 | Press Release, "Parkervision Announces Third Quarter and Nine Month Financial Results," Parkervision Marketing and Manufacturing Headquarters, 3 Pages (October 30, 1998).   |
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FORM PTO-1449

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ATTY. DOCKET NO.  
1744.1330000APPLICATION NO.  
09/986,764APPLICANT  
Rawlins et al.FILING DATE  
November 9, 2001GROUP  
2631

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| Dr.                 | AA33 | 5,680,078          | 10/1997 | Arie             |       |               |             |
|                     | AB33 | 5,680,418          | 10/1997 | Croft et al.     |       |               |             |
|                     | AC33 | 5,689,413          | 11/1997 | Jaramillo et al. |       |               |             |
|                     | AD33 | 5,699,006          | 12/1997 | Zele et al.      |       |               |             |
|                     | AE33 | 5,705,955          | 01/1998 | Freeburg et al.  |       |               |             |
|                     | AF33 | 5,710,998          | 01/1998 | Opas             |       |               |             |
|                     | AG33 | 5,714,910          | 02/1998 | Skoczen et al.   |       |               |             |
|                     | AH33 | 5,715,281          | 02/1998 | Bly et al.       |       |               |             |
| Dr.                 | AI33 | 5,721,514          | 02/1998 | Crockett et al.  |       |               |             |

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|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ33 |                 |      |         |       |               | Yes<br>No   |
|                     | AK33 |                 |      |         |       |               | Yes<br>No   |
|                     | AL33 |                 |      |         |       |               | Yes<br>No   |
|                     | AM33 |                 |      |         |       |               | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

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|-----|----|----|--|
| Dr. | AN | 33 | Press Release, "Parkervision Adds Two New Directors," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (March 5, 1999).                                      |
|     | AO | 33 | Press Release, "Parkervision Announces Fourth Quarter and Year End Financial Results," Parkervision Marketing and Manufacturing Headquarters, 3 Pages (March 5, 1999).     |
|     | AP | 33 | Press Release, "Joint Marketing Agreement Offers New Automated Production Solution," Parkervision Marketing and Manufacturing Headquarters, 2 Pages (April 13, 1999).      |
|     | AQ | 33 | "Project COST 205: Scintillations in Earth-satellite links," <i>Alta Frequenza: Scientific Review in Electronics</i> , AEI, Vol. LIV, No. 3, pp. 209-211 (May-June, 1985). |
| Dr. | AR | 33 | Razavi, B., <i>RF Microelectronics</i> , Prentice-Hall, pp. 147-149 (1998).  |

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FORM PTO-1449

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1744.1330000APPLICATION NO.  
09/986,764APPLICANT  
Rawlins et al.FILING DATE  
November 9, 2001GROUP  
2631

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| Dr.                 | AA34 | 5,724,002          | 03/1998 | Hulick         |       |               |             |
|                     | AB34 | 5,724,653          | 03/1998 | Baker et al.   |       |               |             |
|                     | AC34 | 5,729,577          | 03/1998 | Chen           |       |               |             |
|                     | AD34 | 5,729,829          | 03/1998 | Talwar et al.  |       |               |             |
|                     | AE34 | 5,732,333          | 03/1998 | Cox et al.     |       |               |             |
|                     | AF34 | 5,736,895          | 04/1998 | Yu et al.      |       |               |             |
|                     | AG34 | 5,737,035          | 04/1998 | Rotzoll        |       |               |             |
|                     | AH34 | 5,742,189          | 04/1998 | Yoshida et al. |       |               |             |
| Dr.                 | AI34 | 5,748,683          | 05/1998 | Smith et al.   |       |               |             |

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| EXAMINER<br>INITIAL |      | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-<br>CLASS | TRANSLATION |
|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ34 |                 |      |         |       |               | Yes<br>No   |
|                     | AK34 |                 |      |         |       |               | Yes<br>No   |
|                     | AL34 |                 |      |         |       |               | Yes<br>No   |
|                     | AM34 |                 |      |         |       |               | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

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| Dr. | AN | 34 | Reeves, R.J.D., "The Recording and Collocation of Waveforms (Part 1)," <i>Electronic Engineering</i> , Morgan Brothers Limited, Vol. 31, No. 373, pp. 130-137 (March 1959).                             |
|     | AO | 34 | Reeves, R.J.D., "The Recording and Collocation of Waveforms (Part 2)," <i>Electronic Engineering</i> , Morgan Brothers Limited, Vol. 31, No. 374, pp. 204-212 (April 1959).                             |
|     | AP | 34 | Rein, H.M. and Zahn, M., "Subnanosecond-Pulse Generator with Variable Pulsewidth Using Avalanche Transistors," <i>Electronics Letters</i> , IEE, Vol. 11, No. 1, pp. 21-23 (January 9, 1975).           |
|     | AQ | 34 | Riad, S.M. and Nahman, N.S., "Modeling of the Feed-through Wideband (DC to 12.4 Ghz) Sampling-Head," <i>IEEE MTT-S International Microwave Symposium Digest</i> , IEEE, pp. 267-269 (June 27-29, 1978). |
| Dr. | AR | 34 | Rizzoli, V. et al., "Computer-Aided Noise Analysis of MESFET and HEMT Mixers," <i>IEEE Transactions on Microwave Theory and Techniques</i> , IEEE, Vol. 37, No. 9, pp. 1401-1410 (September 1989).      |

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FORM PTO-1449

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09/986,764APPLICANT  
Rawlins et al.FILING DATE  
November 9, 2001GROUP  
2631

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| Dr.                 | AA35 | RE 35,829          | 06/1998 | Sanderford, Jr. |       |               |             |
|                     | AB35 | 5,760,645          | 06/1998 | Comte et al.    |       |               |             |
|                     | AC35 | 5,764,087          | 06/1998 | Clark           |       |               |             |
|                     | AD35 | 5,767,726          | 06/1998 | Wang            |       |               |             |
|                     | AE35 | 5,768,118          | 06/1998 | Faulk et al.    |       |               |             |
|                     | AF35 | 5,771,442          | 06/1998 | Wang et al.     |       |               |             |
|                     | AG35 | 5,777,692          | 07/1998 | Ghosh           |       |               |             |
|                     | AH35 | 5,777,771          | 07/1998 | Smith           |       |               |             |
| Dr.                 | AI35 | 5,786,844          | 07/1998 | Rogers et al.   |       |               |             |

## FOREIGN PATENT DOCUMENTS

| EXAMINER<br>INITIAL |      | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-<br>CLASS | TRANSLATION |
|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ35 |                 |      |         |       |               | Yes<br>No   |
|                     | AK35 |                 |      |         |       |               | Yes<br>No   |
|                     | AL35 |                 |      |         |       |               | Yes<br>No   |
|                     | AM35 |                 |      |         |       |               | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

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|-----|----|-----------|--|
| Dr. | AN | <u>35</u> | Rowe, H.E., <i>Signals and Noise in Communication Systems</i> , D. Van Nostrand Company, Inc., Princeton, New Jersey, including, for example, Chapter V, Pulse Modulation Systems (1965).  |
|     | AO | <u>35</u> | Rücker, F. and Dintelmann, F., "Effect of Antenna Size on OTS Signal Scintillations and Their Seasonal Dependence," <i>Electronics Letters</i> , IEE, Vol. 19, No. 24, pp. 1032-1034 (November 24, 1983).  |
|     | AP | <u>35</u> | Russell, R. and Hoare, L., "Millimeter Wave Phase Locked Oscillators," <i>Military Microwaves '78 Conference Proceedings</i> , Microwave Exhibitions and Publishers, pp. 238-242 (October 25-27, 1978).  |
|     | AQ | <u>35</u> | Sabel, L.P., "A DSP Implementation of a Robust Flexible Receiver/Demultiplexer for Broadcast Data Satellite Communications," <i>The Institution of Engineers Australia Communications Conference</i> , Institution of Engineers, Australia, pp. 218-223 (October 16-18, 1990). |
| Dr. | AR | <u>35</u> | Salous, S., "IF digital generation of FMCW waveforms for wideband channel characterization," <i>IEE Proceedings-I</i> , IEE, Vol. 139, No. 3, pp. 281-288 (June 1992).   |

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FORM PTO-1449

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1744.1330000APPLICATION NO.  
09/986,764APPLICANT  
Rawlins et al.FILING DATE  
November 9, 2001GROUP  
26

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| EXAMINER<br>INITIAL |      | DOCUMENT<br>NUMBER | DATE    | NAME             | CLASS | SUB-<br>CLASS | FILING DATE |
|---------------------|------|--------------------|---------|------------------|-------|---------------|-------------|
| Dr.                 | AA36 | 5,793,801          | 08/1998 | Fertner          |       |               |             |
|                     | AB36 | 5,793,818          | 08/1998 | Claydon et al.   |       |               |             |
|                     | AC36 | 5,802,463          | 09/1998 | Zuckerman        |       |               |             |
|                     | AD36 | 5,809,060          | 09/1998 | Cafarella et al. |       |               |             |
|                     | AE36 | 5,818,582          | 10/1998 | Fernandez et al. |       |               |             |
|                     | AF36 | 5,825,254          | 10/1998 | Lee              |       |               |             |
|                     | AG36 | 5,834,985          | 11/1998 | Sundegård        |       |               |             |
|                     | AH36 | 5,864,754          | 01/1999 | Hotto            |       |               |             |
| Dr.                 | AI36 | 5,881,375          | 03/1999 | Bonds            |       |               |             |

## FOREIGN PATENT DOCUMENTS

| EXAMINER<br>INITIAL |      | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-<br>CLASS | TRANSLATION |
|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ36 |                 |      |         |       |               | Yes<br>No   |
|                     | AK36 |                 |      |         |       |               | Yes<br>No   |
|                     | AL36 |                 |      |         |       |               | Yes<br>No   |
|                     | AM36 |                 |      |         |       |               | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

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| Dr. | AN | 36 | "Sampling Loops Lock Sources to 23 Ghz," <i>Microwaves &amp; RF</i> , Penton Publishing, p. 212 (September 1990).   |  |  |  |  |
|     | AO | 36 | Sasikumar, M. et al., "Active Compensation in the Switched-Capacitor Biquad," <i>Proceedings of the IEEE</i> , IEEE, Vol. 71, No. 8, pp. 1008-1009 (August 1983).   |  |  |  |  |
|     | AP | 36 | Saul, P.H., "A GaAs MESFET Sample and Hold Switch," <i>Fifth European Solid State Circuits Conference-ESSCIRC 79</i> , IEE, pp. 5-7 (1979).   |  |  |  |  |
|     | AQ | 36 | Shen, D.H. et al., "A 900-MHZ RF Front-End with Integrated Discrete-Time Filtering," <i>IEEE Journal of Solid-State Circuits</i> , IEEE Solid-State Circuits Council, Vol. 31, No. 12, pp. 1945-1954 (December 1996).       |  |  |  |  |
| Dr. | AR | 36 | Shen, X.D. and Vilar, E., "Anomalous transhorizon propagation and meteorological processes of a multilink path," <i>Radio Science</i> , American Geophysical Union, Vol. 30, No. 5, pp. 1467-1479 (September-October 1995). |  |  |  |  |

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FORM PTO-1449

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Rawlins et al.FILING DATE  
November 9, 2001GROUP  
2631

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|---------------------|------|--------------------|---------|-----------------|-------|---------------|-------------|
| Dr.                 | AA37 | 5,892,380          | 04/1999 | Quist           |       |               |             |
|                     | AB37 | 5,894,239          | 04/1999 | Bonaccio et al. |       |               |             |
|                     | AC37 | 5,896,562          | 04/1999 | Heinonen        |       |               |             |
|                     | AD37 | 5,900,747          | 05/1999 | Brauns          |       |               |             |
|                     | AE37 | 5,901,054          | 05/1999 | Leu et al.      |       |               |             |
|                     | AF37 | 5,901,187          | 05/1999 | Iinuma          |       |               |             |
|                     | AG37 | 5,901,344          | 05/1999 | Opas            |       |               |             |
|                     | AH37 | 5,901,347          | 05/1999 | Chambers et al. |       |               |             |
| Dr.                 | AI37 | 5,901,348          | 05/1999 | Bang et al.     |       |               |             |

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|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ37 |                 |      |         |       |               | Yes<br>No   |
|                     | AK37 |                 |      |         |       |               | Yes<br>No   |
|                     | AL37 |                 |      |         |       |               | Yes<br>No   |
|                     | AM37 |                 |      |         |       |               | Yes<br>No   |

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| Dr. | AN | <u>37</u> | Shen, X. and Tawfik, A.N., "Dynamic Behaviour of Radio Channels Due to Trans-Horizon Propagation Mechanisms," <i>Electronics Letters</i> , IEE, Vol. 29, No. 17, pp. 1582-1583 (August 19, 1993).  |
|     | AO | <u>37</u> | Shen, X. et al., "Modeling Enhanced Spherical Diffraction and Troposcattering on a Transhorizon Path with aid of the parabolic Equation and Ray Tracing Methods," <i>IEE Colloquium on Common modeling techniques for electromagnetic wave and acoustic wave propagation</i> , IEE, pp. 4/1-4/7 (March 8, 1996). |
|     | AP | <u>37</u> | Shen, X. and Vilar, E., "Path loss statistics and mechanisms of transhorizon propagation over a sea path," <i>Electronics Letters</i> , IEE, Vol. 32, No. 3, pp. 259-261 (February 1, 1996).   |
|     | AQ | <u>37</u> | Shen, D. et al., "A 900 MHZ Integrated Discrete-Time Filtering RF Front-End," <i>IEEE International Solid State Circuits Conference</i> , IEEE, Vol. 39, pp. 54-55 and 417 (February 1996).  |
| Dr. | AR | <u>37</u> | Spillard, C. et al., "X-Band Tropospheric Transhorizon Propagation Under Differing Meteorological Conditions," <i>Sixth International Conference on Antennas and Propagation (ICAP 89) Part 2: Propagation</i> , IEE, pp. 451-455 (April 4-7, 1989).   |

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FORM PTO-1449

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ATTY. DOCKET NO.  
1744.1330000APPLICATION NO.  
09/986,764APPLICANT  
Rawlins *et al.*FILING DATE  
November 9, 2001GROUP  
2681

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|---------------------|------|--------------------|---------|-------------------------|-------|---------------|-------------|
| Dr.                 | AA38 | 5,901,349          | 05/1999 | Guegnaud <i>et al.</i>  |       |               |             |
|                     | AB38 | 5,903,178          | 05/1999 | Miyatsuji <i>et al.</i> |       |               |             |
|                     | AC38 | 5,903,187          | 05/1999 | Claverie <i>et al.</i>  |       |               |             |
|                     | AD38 | 5,903,196          | 05/1999 | Salvi <i>et al.</i>     |       |               |             |
|                     | AE38 | 5,903,421          | 05/1999 | Furutani <i>et al.</i>  |       |               |             |
|                     | AF38 | 5,903,553          | 05/1999 | Sakamoto <i>et al.</i>  |       |               |             |
|                     | AG38 | 5,903,595          | 05/1999 | Suzuki                  |       |               |             |
|                     | AH38 | 5,903,609          | 05/1999 | Kool <i>et al.</i>      |       |               |             |
| Dr.                 | AI38 | 5,903,827          | 05/1999 | Kennan <i>et al.</i>    |       |               |             |

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|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ38 |                 |      |         |       |               | Yes<br>No   |
|                     | AK38 |                 |      |         |       |               | Yes<br>No   |
|                     | AL38 |                 |      |         |       |               | Yes<br>No   |
|                     | AM38 |                 |      |         |       |               | Yes<br>No   |

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| Dr. | AN | 38 | Stafford, K.R. <i>et al.</i> , "A Complete Monolithic Sample/Hold Amplifier," <i>IEEE Journal of Solid-State Circuits</i> , IEEE, Vol. SC-9, No. 6, pp. 381-387 (December 1974).                   |
|     | AO | 38 | Staruk, W. Jr. <i>et al.</i> , "Pushing HF Data Rates," <i>Defense Electronics</i> , EW Communications, Vol. 17, No. 5, pp. 211, 213, 215, 217, 220 and 222 (May 1985).                            |
|     | AP | 38 | Stephenson, A.G., "Digitizing multiple RF signals requires an optimum sampling rate," <i>Electronics</i> , McGraw-Hill, pp. 106-110 (March 27, 1972).  |
|     | AQ | 38 | Sugarman, R., "Sampling Oscilloscope for Statistically Varying Pulses," <i>The Review of Scientific Instruments</i> , American Institute of Physics, Vol. 28, No. 11, pp. 933-938 (November 1957). |
| Dr. | AR | 38 | Sylvain, M., "Experimental probing of multipath microwave channels," <i>Radio Science</i> , American Geophysical Union, Vol. 24, No. 2, pp. 160-178 (March-April 1989).                            |

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FORM PTO-1449

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ATTY. DOCKET NO.  
1744.1330000APPLICATION NO.  
09/986,764APPLICANT  
Rawlins et al.FILING DATE  
November 9, 2001GROUP  
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| Dr.                 | AA39 | 5,903,854          | 05/1999 | Abe et al.       |       |               |             |
|                     | AB39 | 5,905,449          | 05/1999 | Tsubouchi et al. |       |               |             |
|                     | AC39 | 5,907,149          | 05/1999 | Marckini         |       |               |             |
|                     | AD39 | 5,907,197          | 05/1999 | Faulk            |       |               |             |
|                     | AE39 | 5,911,116          | 06/1999 | Nosswitz         |       |               |             |
|                     | AF39 | 5,911,123          | 06/1999 | Shaffer et al.   |       |               |             |
|                     | AG39 | 5,914,622          | 06/1999 | Inoue            |       |               |             |
|                     | AH39 | 5,920,199          | 07/1999 | Sauer            |       |               |             |
| Dr.                 | AI39 | 5,943,370          | 08/1999 | Smith            |       |               |             |

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|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ39 |                 |      |         |       |               | Yes<br>No   |
|                     | AK39 |                 |      |         |       |               | Yes<br>No   |
|                     | AL39 |                 |      |         |       |               | Yes<br>No   |
|                     | AM39 |                 |      |         |       |               | Yes<br>No   |

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| Dr. | AN | 39 | Takano, T., "NOVEL GaAs Pet Phase Detector Operable To Ka Band," <i>IEEE MT-S Digest</i> , IEEE, pp. 381-383 (1984).   |
|     | AO | 39 | Tan, M.A., "Biquadratic Transconductance Switched-Capacitor Filters," <i>IEEE Transactions on Circuits and Systems- I: Fundamental Theory and Applications</i> , IEEE Circuits and Systems Society, Vol. 40, No. 4, pp. 272-275 (April 1993).                                  |
|     | AP | 39 | Tanaka, K. et al., "Single Chip Multisystem AM Stereo Decoder IC," <i>IEEE Transactions on Consumer Electronics</i> , IEEE Consumer Electronics Society, Vol. CE-32, No. 3, pp. 482-496 (August 1986).   |
|     | AQ | 39 | Tawfik, A.N., "Amplitude, Duration and Predictability of Long Hop Trans-Horizon X-band Signals Over the Sea," <i>Electronics Letters</i> , IEE, Vol. 28, No. 6, pp. 571-572 (March 12, 1992).  |
| Dr. | AR | 39 | Tawfik, A.N. and Vilar, E., "Correlation of Transhorizon Signal Level Strength with Localized Surface Meteorological Parameters," <i>Eighth International Conference on Antennas and Propagation</i> , Electronics Division of the IEE, pp. 335-339 (March 30- April 2, 1993). |

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Rawlins et al.FILING DATE  
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| Dr.                 | AA40 | 4,017,798          | 04/1977 | Gordy et al.    |       |               |             |
|                     | AB40 | 4,032,847          | 06/1977 | Unkauf          |       |               |             |
|                     | AC40 | 4,253,067          | 02/1981 | Caples et al.   |       |               |             |
|                     | AD40 | 4,393,395          | 07/1983 | Hacke et al.    |       |               |             |
|                     | AE40 | 4,816,704          | 03/1989 | Fiori, Jr.      |       |               |             |
|                     | AF40 | 4,841,265          | 06/1989 | Watanabe et al. |       |               |             |
|                     | AG40 | 4,943,974          | 07/1990 | Motamedi        |       |               |             |
|                     | AH40 | 5,115,409          | 05/1992 | Stepp           |       |               |             |
| Dr.                 | AI40 | 5,353,306          | 10/1994 | Yamamoto        |       |               |             |

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|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ40 |                 |      |         |       |               | Yes<br>No   |
|                     | AK40 |                 |      |         |       |               | Yes<br>No   |
|                     | AL40 |                 |      |         |       |               | Yes<br>No   |
|                     | AM40 |                 |      |         |       |               | Yes<br>No   |

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|     | AO | 40 | Tawfik, A.N. and Vilar, E., "Statistics of Duration and Intensity of Path Loss in a Microwave Transhorizon Sea-Path," <i>Electronics Letters</i> , IEE, Vol. 26, No. 7, pp. 474-476 (March 29, 1990).   |
|     | AP | 40 | Tawfik, A.N. and Vilar, E., "X-Band Transhorizon Measurements of CW Transmissions Over the Sea- Part 1: Path Loss, Duration of Events, and Their Modeling," <i>IEEE Transactions on Antennas and Propagation</i> , IEEE Antennas and Propagation Society, Vol. 41, No. 11, pp. 1491-1500 (November 1993). |
|     | AQ | 40 | Temes, G.C. and Tsividis, T., "The Special Section on Switched-Capacitor Circuits," <i>Proceedings of the IEEE</i> , IEEE, Vol. 71, No. 8, pp. 915-916 (August 1983).   |
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FORM PTO-1449

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1744.1330000APPLICATION NO.  
09/986,764APPLICANT  
Rawlins et al.FILING DATE  
November 9, 2001GROUP  
2631

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| Dr.                 | AA41 | 5,515,014          | 05/1996 | Troutman        |       |               |             |
|                     | AB41 | 5,563,550          | 10/1996 | Toth            |       |               |             |
|                     | AC41 | 5,574,755          | 11/1996 | Persico         |       |               |             |
|                     | AD41 | 5,604,592          | 02/1997 | Kotidis et al.  |       |               |             |
|                     | AE41 | 5,638,396          | 06/1997 | Klimek          |       |               |             |
|                     | AF41 | 5,675,392          | 10/1997 | Nayebi et al.   |       |               |             |
|                     | AG41 | 5,694,096          | 12/1997 | Ushiroku et al. |       |               |             |
|                     | AH41 | 5,757,870          | 05/1998 | Miya et al.     |       |               |             |
| Dr.                 | AI41 | 5,768,323          | 06/1998 | Kroeger et al.  |       |               |             |

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|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ41 |                 |      |         |       |               | Yes<br>No   |
|                     | AK41 |                 |      |         |       |               | Yes<br>No   |
|                     | AL41 |                 |      |         |       |               | Yes<br>No   |
|                     | AM41 |                 |      |         |       |               | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

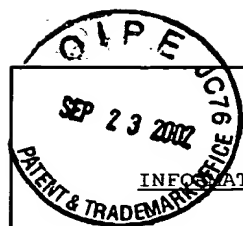
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|     | AO | 41 | Tortoli, P. et al., "Bidirectional Doppler Signal Analysis Based on a Single RF Sampling Channel," IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, IEEE Ultrasonics, Ferroelectrics, and Frequency Control Society, Vol. 41, No. 1, pp. 1-3 (January 1984). |
|     | AP | 41 | Tsividis, Y. and Antognetti, P. (Ed.), Design of MOS VLSI Circuits for Telecommunications, Prentice-Hall, p. 304 (1985).   |
|     | AQ | 41 | Tsividis, Y., "Principles of Operation and Analysis of Switched-Capacitor Circuits," Proceedings of the IEEE, IEEE, Vol. 71, No. 8, pp. 926-940 (August 1983).   |
| Dr. | AR | 41 | Tsurumi, H. and Maeda, T., "Design Study on a Direct Conversion Receiver Front-End for 280 MHZ, 900 MHZ, and 2.6 Ghz Band Radio Communication Systems," 41 <sup>st</sup> IEEE Vehicular Technology Conference, IEEE Vehicular Technology Society, pp. 457-462 (May 19-22, 1991).     |

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FORM PTO-1449

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Rawlins et al.FILING DATE  
November 9, 2001GROUP  
2631

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| Dr.                 | AA42 | 5,770,985          | 06/1998 | Ushiroku et al.      |       |               |             |
|                     | AB42 | 5,778,022          | 07/1998 | Walley               |       |               |             |
|                     | AC42 | 5,812,546          | 09/1998 | Zhou et al.          |       |               |             |
|                     | AD42 | 5,818,869          | 10/1998 | Miya et al.          |       |               |             |
|                     | AE42 | 5,844,449          | 12/1998 | Abeno et al.         |       |               |             |
|                     | AF42 | 5,872,446          | 02/1999 | Cranford, Jr. et al. |       |               |             |
|                     | AG42 | 5,909,447          | 06/1999 | Cox et al.           |       |               |             |
|                     | AH42 | 5,933,467          | 08/1999 | Sehier et al.        |       |               |             |
| Dr.                 | AI42 | 5,952,895          | 09/1999 | McCune, Jr. et al.   |       |               |             |

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|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ42 |                 |      |         |       |               | Yes<br>No   |
|                     | AK42 |                 |      |         |       |               | Yes<br>No   |
|                     | AL42 |                 |      |         |       |               | Yes<br>No   |
|                     | AM42 |                 |      |         |       |               | Yes<br>No   |

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| Dr. | AN | 42 | Valdmanis, J.A. et al., "Picosecond and Subpicosecond Optoelectronics for Measurements of Future High Speed Electronic Devices," <i>IEDM Technical Digest</i> , IEEE, pp. 597-600 (December 5-7, 1983).  |
|     | AO | 42 | van de Kamp, M.M.J.L., "Asymmetric signal level distribution due to tropospheric scintillation," <i>Electronics Letters</i> , IEE, Vol. 34, No. 11, pp. 1145-1146 (May 28, 1998).  |
|     | AP | 42 | Vasseur, H. and Vanhoenacker, D., "Characterization of tropospheric turbulent layers from radiosonde data," <i>Electronics Letters</i> , IEE, Vol. 34, No. 4, pp. 318-319 (February 19, 1998).   |
|     | AQ | 42 | Verdone, R., "Outage Probability Analysis for Short-Range Communication Systems at 60 Ghz in ATT Urban Environments," <i>IEEE Transactions on Vehicular Technology</i> , IEEE Vehicular Technology Society, Vol. 46, No. 4, pp. 1027-1039 (November 1997). |
| Dr. | AR | 42 | Vierira-Ribeiro, S.A., <i>Single-IF DECT Receiver Architecture using a Quadrature Sub-Sampling Band-Pass Sigma-Delta Modulator</i> , Thesis for Degree of Master's of Engineering, Carleton University, UMI Dissertation Services, pp. 1-180 (April 1995). |

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FORM PTO-1449

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09/986,764APPLICANT  
Rawlins et al.FILING DATE  
November 9, 2001GROUP  
2631

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|---------------------|------|--------------------|---------|-------------------|-------|---------------|-------------|
| Dr.                 | AA43 | 5,960,033          | 09/1999 | Shibano et al.    |       |               |             |
|                     | AB43 | 6,041,073          | 03/2000 | Davidovici et al. |       |               |             |
|                     | AC43 | 6,054,889          | 04/2000 | Kobayashi         |       |               |             |
|                     | AD43 | 6,084,922          | 07/2000 | Zhou et al.       |       |               |             |
|                     | AE43 | 6,125,271          | 09/2000 | Rowland et al.    |       |               |             |
|                     | AF43 | 6,147,340          | 11/2000 | Levy              |       |               |             |
|                     | AG43 | 6,147,763          | 11/2000 | Steinlechner      |       |               |             |
|                     | AH43 | 6,150,890          | 11/2000 | Damgaard et al.   |       |               |             |
| Dr.                 | AI43 | 5,126,682          | 06/1992 | Weinberg et al.   |       |               |             |

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|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ43 |                 |      |         |       |               | Yes<br>No   |
|                     | AK43 |                 |      |         |       |               | Yes<br>No   |
|                     | AL43 |                 |      |         |       |               | Yes<br>No   |
|                     | AM43 |                 |      |         |       |               | Yes<br>No   |

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| Dr. | AN | 43 | Vilar, E. et al., "A Comprehensive/Selective MM-Wave Satellite Downlink Experiment on Fade Dynamics," <i>Tenth International Conference on Antennas and Propagation</i> , Electronics Division of the IEE, pp. 2.98-2.101 (April 14-17, 1997).        |
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|     | AP | 43 | Vilar, E. and Smith, H., "A Theoretical and Experimental Study of Angular Scintillations in Earth Space Paths," <i>IEEE Transactions on Antennas and Propagation</i> , IEEE, Vol. AP-34, No. 1, pp. 2-10 (January 1986).                              |
|     | AQ | 43 | Vilar, E. et al., "A Wide Band Transhorizon Experiment at 11.6 Ghz," <i>Eighth International Conference on Antennas and Propagation</i> , Electronics Division of the IEE, pp. 441-445 (March 30- April 2, 1993).                                     |
| Dr. | AR | 43 | Vilar, E. and Matthews, P.A., "Amplitude Dependence of Frequency in Oscillators," <i>Electronics Letters</i> , IEE, Vol. 8, No. 20, pp. 509-511 (October 5, 1972).  |

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FORM PTO-1449

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09/986,764APPLICANT  
Rawlins et al.FILING DATE  
November 9, 2001GROUP  
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| Dr.                 | AA44 | 5,841,811          | 11/1998 | Song               |       |               |             |
|                     | AB44 | 4,051,475          | 09/1977 | Campbell           |       |               |             |
|                     | AC44 | 5,953,642          | 09/1999 | Feldtkeller et al. |       |               |             |
|                     | AD44 | 4,653,117          | 03/1987 | Heck               |       |               |             |
|                     | AE44 | 5,859,878          | 01/1999 | Phillips et al.    |       |               |             |
|                     | AF44 | 5,894,496          | 04/1999 | Jones              |       |               |             |
|                     | AG44 | 5,915,278          | 06/1999 | Mallick            |       |               |             |
|                     | AH44 | 6,028,887          | 02/2000 | Harrison et al.    |       |               |             |
| Dr.                 | AI44 | 6,081,691          | 06/2000 | Renard et al.      |       |               |             |

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|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ44 |                 |      |         |       |               | Yes<br>No   |
|                     | AK44 |                 |      |         |       |               | Yes<br>No   |
|                     | AL44 |                 |      |         |       |               | Yes<br>No   |
|                     | AM44 |                 |      |         |       |               | Yes<br>No   |

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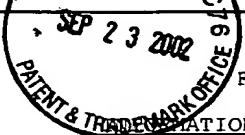
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|     | AO | 44 | Vilar, E. and Burgueño, A., "Analysis and Modeling of Time Intervals Between Rain Rate Exceedances in the Context of Fade Dynamics," <i>IEEE Transactions on Communications</i> , IEEE Communications Society, Vol. 39, No. 9, pp. 1306-1312 (September 1991). |
|     | AP | 44 | Vilar, E. et al., "Angle of Arrival Fluctuations in High and Low Elevation Earth Space Paths," <i>Fourth International Conference on Antennas and Propagation (ICAP 85)</i> , Electronics Division of the IEE, pp. 83-88 (April 16-19, 1985).                  |
|     | AQ | 44 | Vilar, E., "Antennas and Propagation: A Telecommunications Systems Subject," <i>Electronics Division Colloquium on Teaching Antennas and Propagation to Undergraduates</i> , IEE, pp. 7/1-7/6 (March 8, 1988).   |
| Dr. | AR | 44 | Vilar, E. et al., "CERS*. Millimetre-Wave Beacon Package and Related Payload Doppler Correction Strategies," <i>Electronics Division Colloquium on CERS- Communications Engineering Research Satellite</i> , IEE, pp. 10/1-10/10 (April 10, 1984).             |

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|   | APPLICANT<br>Rawlins et al.      |                               |
|   | FILING DATE<br>November 9, 2001  | GROUP<br>2631                 |

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|                     | AB45 | 6,144,236          | 11/2000 | Vice et al.      |       |               |             |
|                     | AC45 | 6,144,846          | 11/2000 | Durec            |       |               |             |
|                     | AD45 | 6,175,728 B1       | 01/2001 | Mitama           |       |               |             |
|                     | AE45 | 5,705,949          | 01/1998 | Alelyunas et al. |       |               |             |
|                     | AF45 | 5,883,548          | 03/1999 | Assard et al.    |       |               |             |
|                     | AG45 | 4,484,143          | 11/1984 | French et al.    |       |               |             |
|                     | AH45 | 5,841,324          | 11/1998 | Williams         |       |               |             |
| Dr.                 | AI45 | 4,855,894          | 08/1989 | Asahi et al.     |       |               |             |

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|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ45 |                 |      |         |       |               | Yes<br>No   |
|                     | AK45 |                 |      |         |       |               | Yes<br>No   |
|                     | AL45 |                 |      |         |       |               | Yes<br>No   |
|                     | AM45 |                 |      |         |       |               | Yes<br>No   |

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FORM PTO-1449

## INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO.  
1744.1330000APPLICATION NO.  
09/986,764APPLICANT  
Rawlins et al.FILING DATE  
November 9, 2001GROUP  
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|                     | AB46 | 5,801,654          | 09/1998 | Traylor           |       |               |             |
|                     | AC46 | 5,369,404          | 11/1994 | Galton            |       |               |             |
|                     | AD46 | 3,716,730          | 02/1973 | Cerny, Jr.        |       |               |             |
|                     | AE46 | 4,080,573          | 03/1978 | Howell            |       |               |             |
|                     | AF46 | 4,334,324          | 06/1982 | Hoover            |       |               |             |
|                     | AG46 | 4,369,522          | 01/1983 | Cerny, Jr. et al. |       |               |             |
|                     | AH46 | 5,465,418          | 11/1995 | Zhou et al.       |       |               |             |
| Dr.                 | AI46 | 5,513,389          | 04/1996 | Reeser et al.     |       |               |             |

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|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ46 |                 |      |         |       |               | Yes<br>No   |
|                     | AK46 |                 |      |         |       |               | Yes<br>No   |
|                     | AL46 |                 |      |         |       |               | Yes<br>No   |
|                     | AM46 |                 |      |         |       |               | Yes<br>No   |

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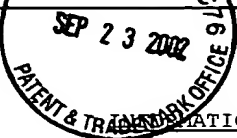
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|   | APPLICANT<br>Rawlins et al.      |                               |
|   | FILING DATE<br>November 9, 2001  | GROUP<br>2631                 |

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|                     | AB47 | 5,157,687          | 10/1992 | Tymes           |       |               |             |
|                     | AC47 | 5,945,660          | 08/1999 | Nakasuji et al. |       |               |             |
|                     | AD47 | 6,091,939          | 07/2000 | Banh            |       |               |             |
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|                     | AH47 | 6,049,706          | 04/2000 | Cook et al.     |       |               |             |
| Dr.                 | AI47 | 6,061,551          | 05/2000 | Sorrells et al. |       |               |             |

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|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ47 |                 |      |         |       |               | Yes<br>No   |
|                     | AK47 |                 |      |         |       |               | Yes<br>No   |
|                     | AL47 |                 |      |         |       |               | Yes<br>No   |
|                     | AM47 |                 |      |         |       |               | Yes<br>No   |

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FORM PTO-1449

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ATTY. DOCKET NO.  
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|                     | AB48 | 6,091,940          | 07/2000 | Sorrells et al. |       |               |             |
|                     | AC48 | 6,266,518 B1       | 07/2001 | Sorrells et al. |       |               |             |
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|                     | AE48 | 6,370,371 B1       | 04/2002 | Sorrells et al. |       |               | 03/03/1999  |
|                     | AF48 | 5,628,055          | 05/1997 | Stein           |       |               |             |
|                     | AG48 | 5,678,220          | 10/1997 | Fournier        |       |               |             |
|                     | AH48 | 5,926,065          | 07/1999 | Wakai et al.    |       |               |             |
| Dr.                 | AI48 | 3,622,885          | 11/1971 | Oberdorf et al. |       |               |             |

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|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ48 |                 |      |         |       |               | Yes<br>No   |
|                     | AK48 |                 |      |         |       |               | Yes<br>No   |
|                     | AL48 |                 |      |         |       |               | Yes<br>No   |
|                     | AM48 |                 |      |         |       |               | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

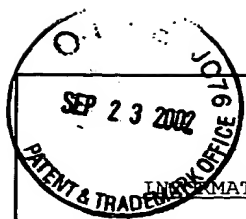
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FORM PTO-1449

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09/986,764APPLICANT  
Rawlins et al.FILING DATE  
November 9, 2001GROUP  
2631

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|                     | AB49 | 6,421,534 B1       | 07/2002 | Cook et al.    |       |               | 08/18/1999  |
|                     | AC49 | 6,330,244 B1       | 12/2001 | Swartz et al.  |       |               | 01/16/1998  |
|                     | AD49 | 4,384,357          | 05/1983 | deBuda et al.  |       |               |             |
|                     | AE49 | 4,470,145          | 09/1984 | Williams       |       |               |             |
|                     | AF49 | 5,600,680          | 02/1997 | Mishima et al. |       |               |             |
|                     | AG49 | 5,606,731          | 02/1997 | Pace et al.    |       |               |             |
|                     | AH49 | 5,870,670          | 02/1999 | Ripley et al.  |       |               |             |
| Dr.                 | AI49 | 6,314,279 B1       | 11/2001 | Mohindra       |       |               | 06/29/1998  |

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|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ49 |                 |      |         |       |               | Yes<br>No   |
|                     | AK49 |                 |      |         |       |               | Yes<br>No   |
|                     | AL49 |                 |      |         |       |               | Yes<br>No   |
|                     | AM49 |                 |      |         |       |               | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

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|     | AO | 49 | Wang, H., "A 1-V Multigigahertz RF Mixer Core in 0.5 - $\mu$ m CMOS," <i>IEEE Journal of Solid-State Circuits</i> , IEEE Solid-State Circuits Society, Vol. 33, No. 12, pp. 2265-2267 (December 1998).   |
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|     | AQ | 49 | Weast, R.C. et al. (Ed.), <i>Handbook of Mathematical Tables</i> , Second Edition, The Chemical Rubber Co., pp. 480-485 (1964).  |
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ATTY. DOCKET NO.  
1744.1330000APPLICATION NO.  
09/986,764APPLICANT  
Rawlins et al.FILING DATE  
November 9, 2001GROUP  
261

## U.S. PATENT DOCUMENTS

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|---------------------|------|--------------------|---------|-----------------|-------|---------------|-------------|
| Dr.                 | AA50 | 5,633,815          | 05/1997 | Young           |       |               |             |
| Dr.                 | AB50 | 09/526,041         |         | Sorrells et al. |       |               | 03/14/2000  |
|                     | AC50 |                    |         |                 |       |               |             |
|                     | AD50 |                    |         |                 |       |               |             |
|                     | AE50 |                    |         |                 |       |               |             |
|                     | AF50 |                    |         |                 |       |               |             |
|                     | AG50 |                    |         |                 |       |               |             |
|                     | AH50 |                    |         |                 |       |               |             |
|                     | AI50 |                    |         |                 |       |               |             |

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| EXAMINER<br>INITIAL |      | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-<br>CLASS | TRANSLATION |
|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ50 |                 |      |         |       |               | Yes<br>No   |
|                     | AK50 |                 |      |         |       |               | Yes<br>No   |
|                     | AL50 |                 |      |         |       |               | Yes<br>No   |
|                     | AM50 |                 |      |         |       |               | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

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| Dr. | AN | <u>50</u> | Worthman, W., "Convergence... Again," <i>RF Design</i> , Primedia, p. 102 (March 1999).   |
|     | AO | <u>50</u> | Young, I.A. and Hodges, D.A., "MOS Switched-Capacitor Analog Sampled-Data Direct-Form Recursive Filters," <i>IEEE Journal of Solid-State Circuits</i> , IEEE, Vol. SC-14, No. 6, pp. 1020-1033 (December 1979). |
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|------------------|------|-----------------|------|------|-------|-----------|-------------|
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|                  | AB51 |                 |      |      |       |           |             |
|                  | AC51 |                 |      |      |       |           |             |
|                  | AD51 |                 |      |      |       |           |             |
|                  | AE51 |                 |      |      |       |           |             |
|                  | AF51 |                 |      |      |       |           |             |
|                  | AG51 |                 |      |      |       |           |             |
|                  | AH51 |                 |      |      |       |           |             |
|                  | AI51 |                 |      |      |       |           |             |

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|------------------|------|-----------------|------|---------|-------|-----------|-------------|
|                  | AJ51 |                 |      |         |       |           | Yes<br>No   |
|                  | AK51 |                 |      |         |       |           | Yes<br>No   |
|                  | AL51 |                 |      |         |       |           | Yes<br>No   |
|                  | AM51 |                 |      |         |       |           | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

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| Dr. | AN | <u>51</u> | Translation of EP Patent No. 0 732 803 A1, 9 pages.   |
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|---------------------|------|--------------------|------|------|-------|---------------|-------------|
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|                     | AB52 |                    |      |      |       |               |             |
|                     | AC52 |                    |      |      |       |               |             |
|                     | AD52 |                    |      |      |       |               |             |
|                     | AE52 |                    |      |      |       |               |             |
|                     | AF52 |                    |      |      |       |               |             |
|                     | AG52 |                    |      |      |       |               |             |
|                     | AH52 |                    |      |      |       |               |             |
|                     | AI52 |                    |      |      |       |               |             |

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|---------------------|------|-----------------|------|---------|-------|---------------|-------------|
|                     | AJ52 |                 |      |         |       |               | Yes<br>No   |
|                     | AK52 |                 |      |         |       |               | Yes<br>No   |
|                     | AL52 |                 |      |         |       |               | Yes<br>No   |
|                     | AM52 |                 |      |         |       |               | Yes<br>No   |

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FORM PTO-1449

## INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO.  
1744.1330000APPLICATION NO.  
09/986,764APPLICANT  
Rawlins et al.FILING DATE  
November 9, 2001GROUP  
2631

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|                     | AA53 |                    |      |      |       |               |             |
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|                     | AJ53 |                 |      |         |       |               | Yes<br>No   |
|                     | AK53 |                 |      |         |       |               | Yes<br>No   |
|                     | AL53 |                 |      |         |       |               | Yes<br>No   |
|                     | AM53 |                 |      |         |       |               | Yes<br>No   |

## OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

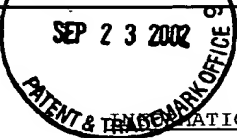
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|  FORM PTO-1449<br>INFORMATION DISCLOSURE STATEMENT | ATTY. DOCKET NO.<br>1744.1330000 | APPLICATION NO.<br>09/986,764 |
|   | APPLICANT<br>Rawlins et al.      |                               |
|   | FILING DATE<br>November 9, 2001  | GROUP<br>2631                 |

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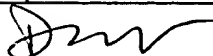
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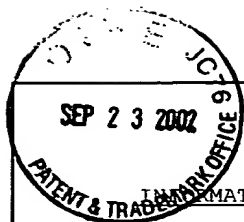
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|                  | AK54            |      |         |       |           | Yes<br>No   |
|                  | AL54            |      |         |       |           | Yes<br>No   |
|                  | AM54            |      |         |       |           | Yes<br>No   |

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|                     | AJ55 |                 |      |         |       |               | Yes<br>No   |
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|                     | AL55 |                 |      |         |       |               | Yes<br>No   |
|                     | AM55 |                 |      |         |       |               | Yes<br>No   |

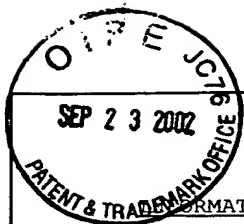
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|                     | AJ56 |                 |      |         |       |               | Yes<br>No   |
|                     | AK56 |                 |      |         |       |               | Yes<br>No   |
|                     | AL56 |                 |      |         |       |               | Yes<br>No   |
|                     | AM56 |                 |      |         |       |               | Yes<br>No   |

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